COLORADO
Colorado Water Conservation Board
Department of Natural Resources

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TO: Colorado Water Conservation Board Members

FROM: Matthew Stearns, P.E., Project Manager
Kirk Russell, P.E., Finance Section Chief

DATE: May 19-20, 2021 Board Meeting

AGENDA ITEM: 20a. Water Project Loans
Redmesa Reservoir and Ditch Company – Redmesa Reservoir Rehabilitation Engineering

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Staff Recommendation

Staff recommends the Board approve a loan not to exceed $184,830 ($183,000 for Project costs and $1,830 for the 1.0% service fee) to the Redmesa Reservoir and Ditch Company for costs related to the Redmesa Reservoir Rehabilitation Engineering, from the Construction Fund. The loan terms shall be 10 years at an interest rate of 0.05% per annum. Security for the loan shall be in compliance with CWCB Financial Policy #5.

Introduction

The Redmesa Reservoir and Ditch Company (Company) is applying for a CWCB blended interest rate loan for the Redmesa Reservoir Rehabilitation Engineering (Project). This loan will fund engineering and permitting to meet the requirements of a Compliance Plan agreed to by the State Engineer's Office (SEO) and the Company to avoid a zero storage restriction, and ultimately a Breach Order of this pre-1922 storage right. Additionally, the costs associated with enlarging the reservoir are relatively minor when compared to the cost of rehabilitating the dam. For this reason, the Company is exploring project partners that can reduce the Company's share of Project costs, potentially increase regional and state-wide benefits, and provide more water storage within the La Plata River basin. Per CWCB Financial Policy 9, this loan is for less than 50% of the total cost of engineering and will be combined with Company reserve funds, a Water Supply Reserve Fund (WSRF) grant approved in September 2020, and a grant from the Southwestern Water Conservation District. The total estimated engineering and permitting cost is $582,400. See attached Project Data Sheet for a location map and Project summary.

Borrower – Redmesa Reservoir and Ditch Company
The Company was formed in 1923 as a not-for-profit corporation. It owns and operates the Redmesa Reservoir (Reservoir) on Hay Gulch and the Redmesa Supply Ditch, which diverts additional water to the Reservoir from the La Plata River. The Company's five-member Board of Directors has full charge of all the Company's business, and assessments are set by stockholders at the Company's annual meeting. Revenues are primarily generated from stock assessments.

The Company is currently made up of 1,138 outstanding shares held by 48 stockholders. Its service area is 3,198 acres of irrigable land in La Plata County; however only approximately 1,600 acres can practically be irrigated. In most years, this number is further reduced to 1,140 acres due to limited water availability.

The Company has been in continuous operation since its formation and is currently identified as in good standing with the Colorado Secretary of State; however, it has not extended its Articles of Incorporation, and has not formally adopted by-laws. The Company is expecting to rectify these issues at a special stockholder meeting noticed for June 1, 2021, but may require a second meeting that will be scheduled as necessary. These issues shall be resolved prior to CWCB entering into a loan contract with the Company. A draft copy of the proposed by-laws includes typical standards for operation of a reservoir and ditch company including the authority to shut off water for non-payment, and ultimately force the sale of stock for delinquent stockholders.

Background
The Reservoir, located on-channel in Hay Gulch, was built in La Plata County in 1910. It was expanded in the 1920s and again in 1945. The Reservoir, however, has not been improved since 1945 with the exception of work to address ice loading on the outlet gate tower in 1973 and again in the 1990s. It currently has a physical storage capacity of 1,176 AF used primarily for agricultural irrigation water diverted by the Old Indian Ditch, Joseph Freed Ditch, Revival Ditch and the Warren Vosburgh Ditch. It also provides a limited amount of augmentation water for domestic wells.

The Reservoir is classified as a high hazard jurisdictional dam by SEO Dam Safety and includes a hydraulically inadequate spillway first documented in 1984. In 1988, this inadequacy was included in an Engineer's Inspection Report prepared by SEO Dam Safety, and in each subsequent report. In January 2018, due to the hydraulic inadequacy of the spillway, the SEO placed a Reservoir Storage Restriction Order (Order) on the Reservoir, limiting storage to 376 AF. The Company completed emergency spillway modifications in February 2018 to increase spillway capacity, and as a result, SEO temporarily waived the Order while they awaited finalization of new standards for analyzing extreme precipitation events, which controls spillway sizing.

In 2020, SEO Dam Safety adopted new Rules and Regulations for Dam Safety and Construction. This resulted in new tools for rainfall analysis that changed the controlling storm scenario for the Reservoir and ultimately reduced the long-term spillway size required for safe operation of the Reservoir. The Company now has the information necessary to properly design the improvements needed at the Reservoir.

In order to continue operation of the Reservoir, the SEO and the Company have agreed to a Compliance Plan (Plan) which allows the Company to fully operate the Reservoir as long as defined milestones for a long-term solution are met. This Plan is reviewed annually, and requires submission of engineered plans and specifications for spillway improvements to SEO Dam Safety by June 30, 2022, and completion of

construction for these improvements by August 1, 2024. Noncompliance with the agreed upon milestones will result in a zero storage restriction, and ultimately a Breach Order on January 1, 2028.

CWCB has been involved in providing financial resources for this inadequacy dating back to at least 1995. This began with a loan approval for an enlargement of the reservoir and its associated feasibility study; however, that project received considerable opposition and was no longer considered feasible. The cost of the feasibility study was forgiven and the loan was deauthorized 2001. In 2003, CWCB funded an enlargement feasibility study that did not result in a loan application since it was anticipated that the enlargement would be funded by a La Plata Water Conservancy District (District) project envisioned to increase storage and provide for better administration of the La Plata River Compact. The District ultimately decided to build the Bobby K. Taylor Reservoir and no funding was left for the Reservoir. Since 2009, CWCB has continued financially supporting the efforts of the Company and has granted a total of $127,900 in the form of WSRF basin fund grants and Loan Feasibility Study grants, which were awarded in 2009, 2012, 2014, 2018, and 2019.

Loan Feasibility Study
Jordan Dimick, P.E. of SGM prepared the Loan Feasibility Study titled, "Redmesa Reservoir Enlargement Final Feasibility Study" dated May 2020. The feasibility study was prepared in accordance with CWCB guidelines and includes an analysis of alternatives, preliminary engineering design, design and engineering cost estimates, and preliminary construction cost estimates. The study was partially funded by a CWCB Loan Feasibility Study grant. Financial statements were prepared and provided by the Company.

Water Rights
The Company has a portfolio of water rights, including valuable pre-1922 appropriated water. These rights are decreed for multiple uses including irrigation, municipal, industrial, recreational, fishery, fire, augmentation, wildlife and domestic uses. Long-term average annual diversions to storage in the Reservoir amount to 1,149 AF from Hay Gulch and an additional 326 AF from the La Plata River through the Redmesa Supply Ditch. The Company's water rights are detailed in Table 1.

TABLE 1: WATER RIGHTS

Source Name	Rate or Volume	Adjudication Date	Appropriation Date	Water Court Case No.
Redmesa Reservoir	1,176 AF	03/21/1966	04/30/1905	CA0807
	2,898 AF	03/21/1966	04/30/1905	CA0807
	3,418 AF	12/31/2001	12/31/2000	01CW0110; 09CW0066
	656 AF	12/31/2001	12/31/2000	01CW0110; 09CW0055
Redmesa Supply Ditch	120 CFS	03/21/1966	04/30/1905	CA0807-C

Project Description
The primary purpose of the Project is to avoid a zero storage restriction as outlined in the SEO Compliance Plan.

Alternative 1 – No Action: This alternative would ultimately lead to a zero-storage restriction by the SEO which would have a negative effect on the Company, its stockholders, and the community.

Alternative 2 – Dam Removal: This alternative would breach the dam and no longer provide water storage for current irrigation and augmentation uses. This alternative was not selected because it would require an expensive construction project that the Company does not have the funds to pay for, while also eliminating the Company's source of revenue. This alternative was estimated to cost $1.2M in a 2013 feasibility study.

Selected Alternative 3 – Dam Rehabilitation Engineering with Potential Storage Enlargement: This alternative was selected as the preferred alternative as it achieves the project purpose and does so while minimizing long-term costs for the Company and keeping it viable. This alternative includes identifying needed environmental permits, providing final design and engineering, and obtaining approval from SEO Dam Safety for selected improvements. It would also identify, and obtain commitments for funding from any potential partners for an enlargement scenario. The estimated cost of this alternative is shown in Table 2.

TABLE 2: ESTIMATED PROJECT COST

Task	Total
Schematic Design	$13,500
Spillway Hazard Classification Determination	$23,500
Surveying and Geotechnical Field Investigations	$149,400
Design Process	$281,000
Permitting	$115,000
TOTAL	**$582,400**

Permitting: The Project will include a review of required local, state, and federal permitting, including submission of approvable engineering plans and specifications for spillway improvements by June 30, 2022.

Schedule: Final design and engineering is expected to be complete by the summer of 2022 per the Compliance Plan, with approval from SEO Dam Safety by the winter of 2022.

Financial Analysis
Table 3 provides a summary of the Project's financial aspects. The Company qualifies for a blended interest rate of 1.10% (Share ownership: 100.0% agricultural, <1.0% middle-income municipal) for a 30-year term. The Company is applying for a 10-year term, thereby qualifying for an interest rate

reduction of 0.55%, and due to the SEO storage restriction, the Company qualifies for an additional 0.50% interest rate reduction per Financial Policy #7, with a resulting interest rate of 0.05%.

TABLE 3: FINANCIAL SUMMARY

Total Project Cost	$582,400
Company Reserves	$49,400
Southwestern Water Conservation District Grant	$75,000
WSRF Grant	$275,000
CWCB Loan Amount	$183,000
CWCB Loan Amount (Including 1% Service Fee)	$184,830
CWCB Annual Loan Payment	$18,534
CWCB Annual Loan Obligation	$20,387
Number of Shares	1,138
Current Assessment per Share	$21.00
Annual Loan Obligation per Share	$17.91

Creditworthiness: The Company has no outstanding debt and has a history of raising assessments from $3.50 to $9.00 in 1994, to $20.00 in 2010, and to $21.00 in 2017.

TABLE 4: FINANCIAL RATIOS

Financial Ratio	Prior Years	Future[1] w/ Project
Operating Ratio (revenues/expenses) weak: <100% | average: 100% - 120% | strong: >120%	291% (strong) $25K/$8.6K	100% (average) $29K/$29K
Debt Service Coverage Ratio (revenues-expenses)/debt service weak: <100% | average: 100% - 120% | strong: >120%	N/A	102% (average) $29K-$8.6K / $20K
Cash Reserves to Current Expenses weak: <50% | average: 50% - 100% | strong: >100%	826% (strong) $71K/$8.6K	76% (average) $22K/$29K
Annual Operating Cost per Acre-Foot (1,475 AF) weak: >$20 | average: $10 - $20 | strong: <$10	$6 (strong)	$20 (average)

1. Assumes an annual assessment increase of $3.48 per share.

Collateral: Security for this loan will be a pledge of assessment revenues and the La Plata River Diversion Structure for the Redmesa Supply Ditch. This security is in compliance with the CWCB Financial Policy #5 (Collateral).

cc: Mardi Gebhardt, Treasurer, Redmesa Reservoir and Ditch Company
Jennifer Mele, Colorado Attorney General's Office

Attachment: Water Project Loan Program – Project Data Sheet

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Redmesa Reservoir Rehabilitation Engineering

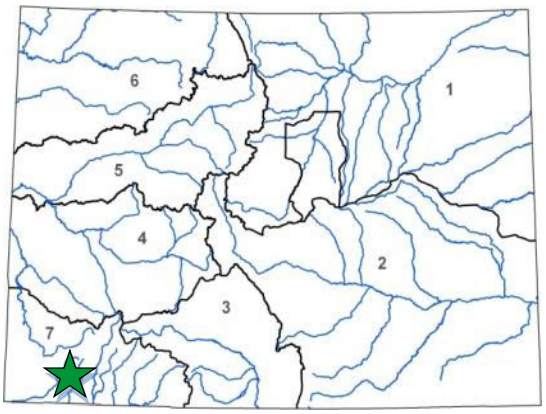
Redmesa Reservoir and Ditch Company

May 2021 Board Meeting

LOAN DETAILS	
Project Cost:	$582,400
CWCB Loan (with 1% Service Fee):	$184,830
Loan Term and Interest Rate:	10 Yrs @ 0.05%
Funding Source:	Construction Fund

BORROWER TYPE		
Agriculture	*Municipal*	*Commercial*
100%	0% Low - <1% Mid - 0% High	0%

PROJECT DETAILS	
Project Type:	Reservoir Rehabilitation
Average Annual Diversions:	1,475 AF
Storage Preserved:	1,176 AF



LOCATION			
County:			La Plata
Water Source:			Hay Gulch, La Plata River
Drainage Basin:			Southwest
Division:	7	*District:*	33

The Redmesa Reservoir and Ditch Company (Company) is a not-for-profit corporation formed in 1923 to own and operate facilities to store and deliver irrigation and domestic water to its stockholders. Currently the Company has 48 stockholders with 1,138 shares and its service area is approximately 3,198 irrigable acres. Given the limited available water, a maximum of 1,600 acres can currently be irrigated. Stockholders primarily grow alfalfa and pasture grass.

Redmesa Reservoir includes an on-channel high hazard dam located 15 miles southwest of Durango. Based on Colorado Dam Safety standards the dam has an undersized spillway. In 2018 a seasonal storage restriction was issued and temporarily waived after emergency repairs were performed. However, a zero storage restriction will be issued if the Company does not comply with the current SEO Dam Safety Compliance Plan. The Company will use loan funds to complete final design and engineering of a rehabilitation project thereby protecting its water rights, including valuable pre-1922 rights. It will also continue to explore enlargement options in order to help perfect a conditional storage right and maximize multi-beneficial outcomes of the project. The Project is expected to be complete in the winter of 2022.